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X.—*A Synopsis of the Genus Pomatorhinus.* By Lieutenant WARDLAW RAMSAY, F.Z.S., M.B.O.U., 67th Regiment.

(Plates III.—V.)

THE range of the genus *Pomatorhinus*, so far as is known, is confined to India, Ceylon, Assam and Arakan, Burmah, China, Formosa, Hainan, Malacca, Java, and Borneo. Twenty-one species are known to science, of which sixteen inhabit the continent of Asia. Of the remaining five insular forms one is found in Java (*P. montanus*, Horsf., type of the genus), two in the island of Formosa (*P. erythrocnemis*, Gould, and *P. nigrostellatus*, Swinhoe), and one in Ceylon (*P. melanurus*, Blyth), all peculiar to the islands on which they are found, whilst a fifth species, which inhabits Borneo (*P. borneensis*, Cabanis), is also found in Malacca. No species of *Pomatorhinus* has been recorded from Sumatra; but it is probable that when the mountainous regions of this island have been scientifically explored, one, if not two or more, possibly undescribed species may be revealed to us.

In the Austro-Papuan region is found a single species, which

should more correctly be placed in the genus *Pomatostomus* (Cabanis, Mus. Hein. i. p. 83), viz. *P. isidori*, Less. Voy. Coq. Zool. p. 680, pl. 29.

The members of this genus are mostly birds which frequent mountainous countries at moderate elevations. Their food seems to consist entirely of insects, and is usually collected by turning over dead leaves on the ground. They are gregarious in their habits, generally being found in small parties, or in pairs, making their way through thick bush-jungle, or hopping about on the ground below. Sometimes a considerable number are found creeping about in the same bush, and all chattering loudly. Mr. R. Swinhoe says, in writing of *P. musicus* (Ibis, 1863, p. 284), "There is not much music in its ordinary call-note; but when two or three are met together, and vie with one another in their strains, the effect is pleasing, though not to be compared to that of the Hwa-mei (*Garrulax taivanus*). When at rest in the middle of the day, hidden in some sombre hill-side wood, they keep on uttering at intervals a series of very liquid notes in regular cadence. These have an indescribably hollow and unnatural sound, and at first puzzle the listener to know whether they are produced by beast, bird, or insect." MM. David and Oustalet say, 'Ois. de la Chine,' p. 184, "C'est un oiseau (*P. gravivox*) très-rusé et très-difficile à découvrir. Il prend toujours à la même heure son bain quotidien et fait entendre, à la tombée de la nuit, son chant sonore et peu varié, mais remarquable par son étrangeté," and, on the authority of the Chinese, "dans certains districts on garde cet oiseau dans les maisons, où il détruit les insectes parasites, et particulièrement les punaises;" this statement, however, has not been confirmed by Père David's observation.

All the members of this genus are subject to considerable variations, both in dimensions and in plumage; but there is no tangible difference in plumage between the sexes.

For notes on the nidification of some species of *Pomatorhinus*, I refer the reader to Jerdon, 'B. of India,' p. 32, Swinhoe, 'Ibis,' 1863, p. 284, and Hume, 'Nests and Eggs of Indian Birds,' pp. 250 and 251.

1. *POMATORHINUS MONTANUS*.

Pomatorhinus montanus, Horsfield, Linn. Trans. xiii. p. 165 (1820) (type of genus); Zool. Res. in Java, pl. 51 (1824).

Head dark slaty brown, lores black, ear-coverts dark brown, a white supercilium from the base of the maxilla to the nape; the whole of the upper surface of the body, and sides of the neck and breast, bright reddish chestnut; primaries brown, faintly margined on the outer web with olive; secondaries, tertiaris, and outer webs of tail-feathers chestnut-brown; throat and breast white; flanks reddish chestnut, passing into chestnut-brown on the belly and lower tail-coverts. Bill yellow, culmen dark.

Wing 3·8 inches, tarsus 1·3, bill from gape 1·15, tail 4·2. Specimen descr. ex Java (*Wallace*): mus. Tweeddale.

Hab. Java.

According to Horsfield (*l.c.*) this bird is confined to the higher ranges of the hills, never descending below about 7000 feet. He further states that it builds its nest on high trees and feeds on berries and fruits or vegetables!! From existing evidence, however, it would appear that *Pomatorhini* are purely insectivorous in their food.

nest on ground

In Borneo and Malacca this species is replaced by the following smaller and distinct race.

2. *POMATORHINUS BORNEENSIS*.

Pomatorhinus borneensis, Cabanis, Mus. Heineanum, i. p. 84 (1850).

Pomatorhinus montanus, Horsfield, S. Müller, Verh. over de Nat. Gesch. Nederl. overz. Bez., Land- en Volkenk. p. 405.

Pomatorhinus borneensis, Cab., Salvad. Ucc. di Born. p. 210.

Specimens from Borneo are identical with those from Malacca, and differ from the Javan *P. montanus* in being constantly much smaller, in the upper parts being rather brighter, and in the secondaries, tertiaris, and tail being olive-brown above instead of chestnut-brown.

Wing 3·5, tarsus 1·1, bill from gape 1·1, tail 3·6. Spec. descr. ex Borneo (*Wallace*) et Malacca (*Maingay*): mus. Tweeddale. Iris yellow (*Doria*).

Hab. Borneo, Malacca.

3. POMATORHINUS MELANURUS.

Pomatorhinus melanurus, Blyth, J. A. S. B. xvi. p. 451 (1847); Ibis, 1867, p. 301; Holdsworth, P. Z. S. 1872, p. 447.

Upper surface, sides of breast, flanks, abdomen, and lower tail-coverts rufescent olive-brown, the crown dark brown, tinged with olivaceous; lores black; ear-coverts dark brown. a white supercilium from the nares to the nape; throat, breast, and centre of belly pure white. Spec. descr. ex Ceylon (*Nevill*): mus. Tweeddale.

Bill pale yellow; irides red brown; feet lead-colour (*Holdsworth*).

Hab. Ceylon.

There is considerable variation both in plumage and size between specimens from different parts of Ceylon; indeed Holdsworth (*l. c.*) hints at the possibility of there being two species in the island; but this I am not disposed to admit.

The small race which is found at Newera Eliya has the back olive-brown, without being in the least rufescent, whilst the larger race, of which there are specimens in Lord Tweeddale's museum, obtained by Mr. Spencer Chapman at Avis-havelle and Ruanwellé, near Colombo, has the above-mentioned part of a very bright rufescent olive-brown, and a few of the lateral breast- and flank-feathers partially white or centred white as in *P. schisticeps*, between which species and *P. montanus*, of Java, the present species is intermediate.

The dimensions of these two races, as they may be called, are as follows:—

Large. Wing 3·6 to 3·7 inches, bill from gape 1 to 1·5, tarsus 1·3, tail 4·2.

Small. Wing 3·2 to 3·5 inches, bill from gape 1 to 1·5, tarsus 1·25, tail 3·75.

4. POMATORHINUS SCHISTICEPS. (Plate III.)

Pomatorhinus schisticeps, Hodgson, As. Res. xix. p. 181 (1836); Jerdon, B. of Ind. ii. p. 29.

Pomatorhinus leucogaster, Gould, P. Z. S. 1837, p. 137.

Pomatorhinus montanus, Horsfield, M'Clelland, P. Z. S. 1839, p. 166.

Above dull olive-green ; head above from forehead to nape dark slate-colour ; lores and ear-coverts black, a white supercilium from nostrils to nape ; throat, breast, and belly pure white ; flanks, sides of the breast, and a patch on each side of the neck behind the ear-coverts ferruginous chestnut, the lateral breast-feathers centred white ; sides of the abdomen, thighs, and lower tail-coverts dusky olive-green. Spec. descr. ex Darjeeling : mus. Tweeddale.

Bill orange-yellow, culmen dark brown ; irides hoary (*Jerd.*), purple (*Godwin-Austen*) ; legs plumbeous.

Wing 4·0 in., bill from gape 1·3, tarsus 1·3, tail 4·2 to 4·6.

In some specimens the head is dull olive-green, only tinged with cinereous.

Hab. N.W. Himalayas, Nepal, Sikkim, Bootan, Dacca (*Jerdon*), Assam (*Godwin-Austen*).

After a careful examination of a large series of *P. schisticeps* and the so-called *P. leucogaster*, from the Himalayas, Garo hills, Munipur, Dafla hills, Naga hills, and Saddya, it seems to me quite impossible to recognize two species. Blyth states (*Cat. B. of Burma*, 1875, p. 113) that *P. leucogaster* is smaller than *P. schisticeps*. I have examined three of Hodgson's Nepal type specimens of *P. schisticeps* in the British Museum ; and these have the wing respectively 4·07, 3·9, and 3·6. Gould, in his description of *P. leucogaster*, gives the wing as 3·75, which is actually longer than in one of the specimens of typical *P. schisticeps*.

The race which inhabits Burmah and Karen-nee is more closely allied to *P. olivaceus*, Blyth, than to *P. schisticeps*, to which Mr. Hume (*S. F.* iii. p. 121) refers specimens from Thyetmyo. This race has been separated by Lord Tweeddale under the title of *Pomatorhinus nuchalis* (*vide infra*).

5. POMATORHINUS OLIVACEUS.

Pomatorhinus olivaceus, Blyth, *J. A. S. B.* xvi. p. 451 (1847) ; Hume, *S. F.* v. p. 137.

Differs from *P. schisticeps* in having the upper surface somewhat brighter, the nape faintly tinged with ferruginous, the bill yellow throughout, and by the ferruginous neck-spot not being extended down the sides of the breast and flanks,

these parts in the present species being light earthy brown. Spec. ex Meetan (*Limborg*) : mus. Tweeddale.

Bill yellow ; legs grey (*Limborg*).

Hab. Yé, Tenasserim Provinces (*Barbe*) ; Meetan, Tenasserim (*Limborg*).

6. *POMATORHINUS NUCHALIS*.

Pomatorhinus nuchalis, Tweeddale, Ann. & Mag. Nat. Hist. ser. 4, xx. p. 535.

Pomatorhinus leucogaster, Gould, apud Walden, J. A. S. B. 1875, p. 118.

Pomatorhinus schisticeps, Hodgs. apud Hume, S. F. v. p. 137.

Distinguished from *P. olivaceus* by the ferruginous neck-spot being extended down the flanks as in *P. schisticeps*, Hodgson ; but the white streaks down the centre of the ferruginous lateral breast-feathers, which are so marked in the latter species, are here altogether wanting. It has also a ferruginous nuchal collar, which is very broad and distinct in specimens from Karen-nee. Spec. mus. nostr.

Iris straw-yellow ; bill orange-yellow, black near the base of maxilla ; legs slaty (*W. R.*).

Wing 3·6 inches, bill from gape 1·25, tail 4·0, tarsus 1·15.

Hab. Thyetmyo, Tonghoo, Karen hills, Karen-nee (*W. R.*)

7. *POMATORHINUS FERRUGINOSUS*. (Plate IV. fig. 1.)

Pomatorhinus ferruginosus, Blyth, J. A. S. B. xiv. p. 597 (1845) ; Jerdon, B. of Ind. ii. p. 29.

Pomatorhinus rubiginosus, Blyth (laps. cal.), J. A. S. B. xxiv. p. 273.

Crown and nape black, a black patch extending from the lores below the eye to the nape, and separated from the black of the crown and nape by a broad white supercilium, which commences in a tuft of stiff ferruginous loreal feathers ; upper part of the throat and lower cheeks white, forming a broad white crescent. Body above and tail greenish olive-brown, brighter on the wings ; lower throat, breast, and belly bright ferruginous, changing into olive-brown on the flanks and lower tail-coverts. Spec. descr. ex Darjeeling : mus. Tweeddale.

Bill coral-red ; legs greenish brown ; irides red-brown (*Jerdon*).

Bill crimson; legs dull green; irides pale greenish yellow (*Godwin-Austen*).

Wing 3·6 inches, bill from gape 1·2, tarsus 1·3, tail 4.

Hab. S.E. Himalayas, Darjeeling, Arakan (*Blyth*), Nepal, Sikkim (*Jerdon*), Daffa hills (*Godwin-Austen*).

8. *POMATORHINUS PHAYRII*. (Plate IV. fig. 2.)

Pomatorhinus phayrii, Blyth, J. A. S. B. xvi. p. 452 (1847); Jerdon, Ibis, 1872, p. 301.

Very closely allied to the last species, from which it differs in having the crown of the head of the same colour as the back, and in the ferruginous colour of the lower surface being less deep, the stiff loreal feathers much reduced and pale yellow, and in the upper ridge of the supercilium having a black margin. Spec. descr. mus. Godw. Aust.

Wing 3·5 to 3·8 in., bill from gape 1·2, tarsus 1·4, tail 4·1.

Bill yellowish coral-red; irides pale yellow (*Godwin-Austen*).

Hab. Arakan, Khasias, Tavoy (*Blyth*), Nepal or Sikkim (*Hodgson*), Manipur, Naga hills, Cherra Poonjee (*Godwin-Austen*).

9. *POMATORHINUS ALBIGULARIS*. (Plate V. fig. 1.)

Pomatorhinus albogularis, Blyth, J. A. S. B. xxiv. p. 274 (1855).

Pomatorhinus mariæ, Walden, Ann. & Mag. Nat. Hist. ser. 4, xv. p. 403 (1875).

Differs from *P. phayrii* in the upper parts being of a much brighter brown, the entire throat and lower part of the cheeks white, the lower parts being merely washed with ferruginous, and the white superciliary streak being much broader, especially near the lores. Spec. descr. ex Karen hills: mus. W. R., type of *P. mariæ*.

Bill coral-red.

Wing 3·7 inches, bill from gape 1·1, tarsus 1·25, tail 4.

Hab. Mooleyit (*Tickell*), Karen hills (*W. R.*), Tenasserim (*Hume*).

10. *POMATORHINUS STENORHYNCHUS*. (Plate V. fig. 2.)

Pomatorhinus stenorhynchus, Godwin-Austen, J. A. S. B. xlv. p. 43 (1877).

Differs from the last in being smaller and in having the back of a much greener cast and the head more ochraceous, and in wanting the black patch from the bill to the nape; the white supercilium not being margined above with black, and not extending beyond the ear-coverts; lores black, ear-coverts dark brown; the bill very long, tapering, and much curved. Spec. descr. ex Saddya: mus. Godw. Aust.

Legs and feet horny grey; bill bright orange-red (*G. A.*).

♂. Wing 4.0 in., tail 4.4, tarsus 1.35, bill at front 1.45.

♀. Wing 3.25 in., tail 3.9, tarsus 1.20, bill at front 1.15.

Hab. Assam, near Saddya (*Godwin-Austen*).

Colonel Godwin-Austen's type specimen (♂) has an abnormally long and slender bill, whilst two other (♀) specimens have the bill much the same as in the succeeding species.

11. POMATORHINUS OCHRACEICEPS.

Pomatorhinus ochraceiceps, Walden, Ann. & Mag. Nat. Hist. ser. 4, xii. 1873, p. 487; Wardlaw Ramsay, Ibis, 1877, p. 465, pl. xiii.

Allied to *P. albigularis* and *P. stenorhynchus*, differing from the latter in having the entire lower surface except the flanks, vent, and lower tail-coverts white, and in the head being of even a brighter ochraceous colour, the supercilium extending to the neck. The bill is not typical, but long, slender, and much curved as in the last species. Spec. descr. mus. W. R., type.

Iris pale straw-yellow; bill coral-red, tinged with orange; legs greenish (*W. R.*).

Hab. Karen hills (*W. R.*), Tenasserim (*Limborg*).

12. POMATORHINUS HORSFIELDI.

Pomatorhinus horsfieldii, Sykes, P. Z. S. 1832, p. 89; Jerdon, B. of Ind. ii. p. 31; Des Murs, Icon. Orn. pl. 22.

Upper surface of an olive-brown, brighter on the wings and tail, which is faintly barred, the feathers on the crown tipped with black. Lores black, from which springs a broad dark greenish black cheek-stripe or patch extending below the eye across the ear-coverts and sides of the neck to the sides of the breast and belly, which are pure black; a broad white supercilium ex-

tends from the base of the maxilla to the nape; the whole throat breast, and upper belly pure white; round the margin of the white some of the black feathers are longitudinally striated with white, and some of the white feathers are mottled with black; flanks, vent, and lower tail-coverts olive-brown. Spec. descr. ex Neilgherries: mus. *W. R.*

Bill yellow; basal half of maxilla dark brown; legs dusky green; irides red-brown.

Wing 3·8 to 4·0 in., bill from gape 1·1 to 1·3, tarsus 1·4, tail 4.

Col. Sykes remarks (*J. A. S. B.* iii. p. 537), "Minute insects (Dipterous) found in the stomach . . . the tongue and habits of this bird are those of a Thrush or *Timalia*."

This species is very abundant on the Neilgherries, where, like all the members of its genus with which I am acquainted in the wild state, it is gregarious.

For remarks on its nidification, *vide* 'Ibis,' 1875, p. 320, and 'Stray Feathers,' iv. p. 399.

Hab. Southern India, Central India (*Jerdon*), Cuttack (*Blyth*).

13. *POMATORHINUS* 'OBSCURUS.

Pomatorhinus obscurus, Hume, *Stray Feathers*, i. p. 7 (1873).

"Very like *P. horsfieldi*, Sykes, but larger (?); bill longer; deeper, and more compressed, and general colour (where not white) dull smoky earthy brown" (*Hume*).

"Irides dark reddish brown; legs olivaceous slate; bill ivory-yellow, horny at base of upper mandible" (*Butler*).

Wing 3·8, bill at gape 1·4, tarsus 1·25, tail 4·0. Spec. descr. ex Khandala: (*Fairbank*) mus. Tweeddale.

Two specimens from Candeish, two from Khandala, and three from Mahabaleshwar are referable to this species, which seems to be quite unmistakable.

These are all smaller than the average of my series of true *P. horsfieldi* from the Neilgherries; and Captain Butler's wing-measurements (*S. F.* iii. p. 471) of four specimens from Mount Aboo do not bear out Mr. Hume's statement that *P. obscurus* is larger than *P. horsfieldi*. Captain Butler states (*l. c.*) that this species, unlike its congener *P. horsfieldi*, is not gregarious (?).

Hab. Seonee, Mount Aboo, Central Provinces (*Butler*) ; Candeish, Khandala, Mahabaleshwar (*Fairbank*).

14. *POMATORHINUS RUFICOLLIS*.

Pomatorhinus ruficollis, Hodgson, As. Res. xix. p. 182 (1836) ; Jerdon, B. of Ind. ii. p. 29.

Pomatorhinus stridulus, Swinhoe, Ibis, 1861, p. 265.

Head and whole upper surface olive-brown ; nape and sides of the neck from directly behind the ear-coverts bright rusty ; lores black ; ear-coverts dark brown, streaked with white on the lower side, a white supercilium from the forehead to the nape ; throat pure white, breast white, more or less spotted and striated with pale olive-brown or earthy brown, with which in some the flanks, abdomen, and lower tail-coverts are coloured. Spec. descr. ex Nepal : mus. Tweeddale.

Bill yellow, culmen dark ; irides red brown ; legs yellowish grey : spec. ex Nagas (*Godwin-Austen*).

Wing 3·2 inches, bill from gape 1, tarsus 1·2, tail 3·6.

Hab. Nepal, Himalayas, Assam (*Godwin-Austen*), S. China (*Swinhoe*), W. China (*David*).

Colonel Godwin-Austen draws attention (J. A. S. B. 1876, p. 75) to the fact that specimens from the Daffa hills agree with those from Darjeeling, but not with Naga-hill and Nepal birds. Specimens from the two first-mentioned localities are larger, and have much stronger legs and feet, and the olive-brown of the wings and back has a much redder tinge.

I agree with MM. David and Oustalet (Ois. de la Chine, p. 186) in reducing the title of *P. stridulus*, Swinhoe, to the rank of a synonym of this species. It is absolutely impossible in any way to separate the birds collected by Père David in Setchuen from Nepalese specimens. Two specimens, otherwise agreeing with the above, from Eastern China exhibit a rufous pectoral band formed by the nuchal collar being continued across the breast ; but in one of Hodgson's Nepal specimens in the British-Museum collection the same thing occurs. This species, according to David and Oustalet (*l. c.*), is subject to considerable variations in plumage, even among specimens from the same locality, like most of the members of the genus.

15. *POMATORHINUS MUSICUS*.

Pomatorhinus musicus, Swinhoe, J. A. S. Shanghai, ii. p. 228 (1857); Ibis, 1863, p. 284, pl. vi.; Dav. et Oust. Ois. de la Chine, p. 185.

Allied to *P. ruficollis*, Hodgson, but larger. It has the crown deep olive-grey, and the nuchal collar much brighter and broader, covering part of the back; the flanks and sides of the belly of a bright ferruginous, fading into olive-brown towards the vent; the whole throat and breast pure white, the latter spotted with large oval black drops; the white extending down the centre of the belly in some specimens. Spec. descr. mus. Tweeddale.

The young bird is rather browner, but otherwise similar to the adult (*Swinhoe*).

Iris straw-colour; legs dusky leaden grey; upper mandible brownish black, under and apical edge of half upper fleshy white, with wash of lemon (*Swinhoe*).

Length 8·2 to 8·5 inches (*Swinhoe*), wing 3·2 to 3·4, tarsus 1·25, bill from gape 1·05, tail 3·7.

Hab. Formosa (*Swinhoe*).

16. *POMATORHINUS NIGROSTELLATUS*.

Pomatorhinus nigrostellatus, Swinhoe, Ibis, 1870, p. 250.

This species is very closely allied to *P. musicus* of the island of Formosa; but, besides being a smaller bird (which character, as I have before pointed out, is of little value in this genus), the head is of the same bright olive-brown as the remainder of the upper parts, and the breast is much more thickly spotted and with much narrower black drops, which commence higher up on the throat and descend much lower on the breast. The ferruginous feathers of the flanks and belly have a narrow white margin, producing on these parts an appearance of striation; the nuchal collar, which is much darker, only extends across the back of the neck, not joining into the ferruginous of the flanks. Spec. descr. mus. Tweeddale.

“Bill pale yellow, brownish black on the basal half of the culmen; legs and feet leaden grey; irides yellowish.

“♂ and ♀. Length about 7·37, wing 3, tail 3·4, of ten feathers” (*Swinhoe*).

Hab. Hainan (*Swinhoe*).

Mr. Swinhoe remarks (*l. c.*) that the female is not so rufescent as the male, and wants the red on the hind neck.

17. *POMATORHINUS HYPOLEUCUS*.

Orthorhinus hypoleucus, Blyth, J. A. S. B. xiii. p. 371 (1844).

Pomatorhinus hypoleucus, Blyth, J. A. S. B. xiv. p. 597 (1845).

Pomatorhinus albicollis (Horsf. MS.), G. R. Gray, Gen. of B. i. pl. 57 (1846).

Pomatorhinus hypoleucus, Blyth, Jerdon, Ibis, 1872, p. 301.

Pomatorhinus inglisi, Hume, S. F. v. p. 32 (1877).

"Colour above olive-brown, a little cinerascens on the head; and a rufous streak commences behind the eye, and expands into a patch on the sides of the neck beyond the ear-coverts; lower parts white, margined with ashy on the sides of the breast; and the flanks wholly ashy with a tinge of brown; wings and tail a little rufescent, the lower tail-coverts a little more deeply so.

"Length 10 to 11 inches, wing 4.25, tail 4, bill to gape 1.75, tarsus 1.50" (*Blyth*) (*descr. orig.*).

Hab. Tipperah, Arracan, Khasias (*Blyth*); Assam (*Godwin-Austen*); Sikkim or Nepal (*Hodgson*, *fide Jerdon*).

For want of good adult specimens from Arakan and Tipperah, I am unable to write with much certainty about this species. I have before me ten specimens in all from Hill Tipperah, Garo hills, Naga hills, Cachar, Dafla hills, Saddya, and Arakan (*Blyth's* type specimen, J. A. S. B. xiii. 371). I provisionally retain the birds from all these localities under the title *P. hypoleucus*, *Blyth*. Mr. A. O. Hume (S. F. v. p. 32) has separated the Cachar bird under the title of *P. inglisi*; and with reference to Mr. Hume's remarks (*l. c.*) I may mention that the description of *P. hypoleucus* (*Ibis*, 1872, p. 301) he alludes to was not written by Jerdon, but by Lord Tweeddale, and was taken from a Garo-hill specimen—the only specimen which he happened to have in his house at the time he was completing Jerdon's manuscript*, and which I have before

* See *Ibis*, 1872, p. 297, footnote. Colonel Godwin-Austen was in

me now. In Colonel Godwin-Austen's collection, which he has kindly placed at my disposal, is a specimen from Dina-pur, in the Cachar hills, which agrees closely with other Assamese specimens: it has a faint trace only of the rufous patches on the sides of the neck; but this character I find cannot be depended upon; for of two specimens from the Naga hills in the same collection, one has the rufous neck-patch highly developed, and the other has it only faintly indicated. Further, of two specimens from the Garo hills one has the rufous patches wholly wanting (this was the specimen Lord Tweeddale described *l. c.*), and another has them just perceptible, but not so distinct as in the Cachar bird. There is, I think, no tangible difference between the Cachar bird and other Assamese specimens; but not having good adult Arakan or Tipperah specimens* wherewith to compare them, I am unable to say whether they also agree.

Colonel Godwin-Austen writes to me, "The point of difference between the Assam variety and the true *hypoleucus* from Arakan is to be found in the coloration of the sides of the breast and flanks: the Arakan type specimen and another identical with it from Hill Tipperah have these very finely streaked with ash-grey and centred white; but in all the Assam birds the grey is more pronounced, and the white streaks are wider and larger. If this race is to be separated it will stand as *P. albicollis*, Horsfield, figured in Gray's 'Gen. of Birds' from a specimen obtained by Griffiths in Assam, and not Affghanistan, as given in the 'Cat. B. of Ind. Museum.'"

Now Col. Godwin-Austen's Hill-Tipperah specimen is a young bird, judging from its plumage, and is in the plumage in which Blyth's specimen (which I have before me) was at the time he described it (1844), and which has faded into a rusty brown colour on the upper surface, and a rusty white colour on the lower. I would therefore hazard the opinion

error when he supposed that Jerdon took the description in question (P. A. S. B. 1877, p. 147) from his Cachar bird. In point of fact, Jerdon never described the bird anywhere.

* Blyth's type (which is before me) is immature; but even were it adult, it is so faded as to be wholly unfit for the purpose of comparison.

that adult birds from Tipperah and Arakan will be found to be identical with those from Assam, especially as Blyth's corrected description of his *Orthorhinus hypoleucus* (J. A. S. B. xiv. p. 597) agrees with adult specimens from Assam. Unfortunately the specimen from which he took this description was not brought home by Colonel Godwin-Austen, and is, I presume, still in the Calcutta Museum.

Another variety (*P. tickelli*, Blyth, apud Tickell, Ibis, 1863, p. 113), occurs in Tenasserim, having been obtained on the mountains of that province by Colonel Tickell in 1855. Mr. Blyth, however (J. A. S. B. 1855, p. 273), treated this specimen as merely a variety of *P. hypoleucus*, and thought it probable that it might be only a particularly fine adult of that species. As this specimen (which I have now before me) is, like so many of the specimens from the Calcutta Museum, so much faded as to be almost useless for describing, I give Blyth's own words (*l. c.*) :—"Specimen remarkable for having narrow white mesial streaks to the feathers of the nape, chiefly towards the sides of the nape, which we can perceive no trace of in Arakan specimens; and similar well-defined but wider streaks on the dark ash-coloured sides of the breast, which are little more than indicated in the Arakan specimens under examination." Mr. A. O. Hume has lately (S. F. v. p. 32) proposed the name "*tickelli*" for this supposed species. It was known to Col. Tickell (Ibis, 1863, p. 113) as *P. tickellii*, Blyth, but no reference is given.

18. *POMATORHINUS ERYTHROGENYS*.

Pomatorhinus erythrogenys, Vigors, P. Z. S. 1830-31, p. 173; Gould, Cent. of B. pl. 55.

Pomatorhinus ferrugilatus, Hodgs. As. Res. xix. p. 180 (1826).

Pomatorhinus erythrogenys, Gould, Jerdon, B. of I. ii. p. 31.

Above cinereous olive-brown; forehead, a line under the eye, ear-coverts, sides of the neck and breast, flanks, lower tail-coverts, and thighs bright rusty brown, inclining to chestnut on the lower tail-coverts and thighs; throat and breast white, the former cinereous in some specimens and in

others dark smoky grey ; these latter I take to be very old birds : spec. descr. mus. Tweeddale, Himalayas. In some examples the rusty sides of the breast almost meet, and in one (from Darjeeling) form a pectoral band a quarter of an inch broad ; and, further, some specimens have a brown streak along the rami of the mandible ; but in others this is absent.

Iris pale yellowish white ; bill horny green, darker along ridge of upper mandible ; legs and claws fleshy (*Beavan*).

Wing 3·9 inches, bill from gape 1·4 to 1·6, tarsus 1·4 to 1·5, tail 4·5.

Hab. Himalayas (*Jerdon*), Tenasserim (*Hume*).

This species belongs, as the last, to a group which ought perhaps to be generically separated, as has been suggested by other authors. All the species of it (six in number, viz. *P. hypoleucus*, Bl., *P. erythrogeus*, Vig., *P. m'clellandi*, Jerd., *P. erythrocnemis*, Gould, and *P. swinhoei*, Dav. et Oust.), have the bill dark-coloured, rather more curved than in typical *Pomatorhinus*, and very large.

19. POMATORHINUS M'CLELLANDI.

Pomatorhinus m'clellandi, Jerdon, B. of India, ii. p. 32 (1863); Godw.-Aust. J. A. S. B. xxxix. p. 104 ; Ibis, 1872, p. 302.

Pomatorhinus gravivox, David, Ann. Sc. Nat. (5) xviii. p. 2 (1873) ; D. & O. Ois. de la Chine, p. 183, pl. 49.

Allied to *P. erythrogeus*, Vigors ; but differing in its much smaller size, and the forehead, ear-coverts, and under tail-coverts only being rusty brown, the flanks olive-brown, throat, middle of the belly, and breast being white, the latter with a distinct large triangular brown spot on each feather, and a brown moustachial streak along the rami of the mandible. Spec. descr. ex Assam : mus. Godwin-Austen.

In some specimens a few of the white feathers of the breast are very faintly tinged with rusty, forming a rudimentary band, which is very highly developed in one specimen only of *P. erythrogeus* above referred to.

Irides ochre ; legs and feet fleshy grey (*Godwin-Austen*).

Wing 3·3 inches, bill from gape 1·2, tarsus 1·35, tail 3·8 (Khasia).

Naga-hill birds in Colonel Godwin-Austen's collection exceed all these measurements, having the wing 3·5 inches and the bill from gape 1·5.

Hab. Khasias (*Jerdon*); Naga hills, Saddya, Munipoor (*Godwin-Austen*); Setchuen, Chensi (*David*).

Pomatorhinus gravivox, *David (l. c.)*, is clearly this species, judging by the description and plate in the 'Ois. de la Chine,' where it is stated to inhabit "the mountains in Central Chensi and Northern Setchuen, as well as the chain between the provinces of Houpé and Honan."

20. POMATORHINUS ERYTHROCNEMIS.

Pomatorhinus erythrocnemis, Gould, P. Z. S. 1862, p. 281; B. of Asia, pt. xvi. pl. iv.; Swinhoe, Ibis, 1863, p. 286.

Forehead at base of maxilla, a small patch below the ear-coverts, a few feathers on either side of the breast, knees, and lower tail-coverts rusty red; head and neck cinereous brown, each feather margined with olive-brown; lower neck, back, wing-coverts, outer webs of the wing-feathers bright reddish chestnut; tail reddish olive-brown; beneath white, a broad moustache along the rami of the mandible dark brown, the feathers of the breast conspicuously marked with large acutely angular spots of the same colour; flanks and thighs olive-brown. Spec. descr. mus. Tweeddale.

"Legs leaden-grey, claws brownish; irides light reddish brown; bill much curved, blackish grey, with pale edges.

"In the young bird the bill is much shorter and less curved, the head is browner, and the back and upper parts more rufous, but the underparts are dingier and the colours generally not so bright as in the adult" (*Swinhoe, l. c.*).

Wing 3·8 inches, bill from gape 1·6, tarsus 1·5, tail 4.

Hab. Formosa, where it replaces in the central mountains *P. musicus* of the low country, rarely descending below 2000 feet (*Swinhoe*).

21. POMATORHINUS SWINHOEI.

Pomatorhinus swinhoei, A. Dav. Ann. Sc. Nat. ser. 5. vol. xix. art. 9, p. 5 (1874); Oiseaux de la Chine, p. 184, pl. 48.

Of this species, which was described three years ago by Père

David from S.E. China, where it inhabits "the wooded mountains which separate the provinces of Kiangsi and Fokien," I have not seen specimens; but judging by the description and plate in the 'Ois. de la Chine,' is doubtfully distinct from *P. erythrocnemis*, Gould, of Formosa, from which it appears to differ chiefly in the iris being pale yellow (*D. & O.*), the lower breast and abdomen of an ashy grey, and the head browner, more uniform with the colour of the back, which is of a much brighter chestnut and by the black stripe on the rami of the mandible being hardly traceable. These characters are nearly identical with those by which Swinhoe (*l. c.*) differentiates the young of *P. erythrocnemis*, Gould.

Iris pale yellow; bill blackish brown with the base greyish; tarsi and toes brown; claws grey, with brown tips (*David & Oustalet*).

XI.—Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. GURNEY.

[Continued from p. 102.]

I THINK it desirable to mention a Malabar specimen of *Spilornis* which has been acquired by the Norwich Museum subsequently to the publication of my last paper, though unfortunately I am not able to give its exact locality, neither do I know the sex of the specimen. It is an adult bird in fresh plumage, very little abraded, and most nearly resembles, as it seems to me, the Bengal specimen presented by Captain Pinwill to the British Museum (*vide antea*, p. 95), though not quite so rufous on the underparts. The crop is much vermiculated; and the chin is black with a slight slaty tinge, and also with a tinge of brown next the throat. From the district where this specimen was obtained, it is interesting to observe that it is quite distinct from *S. spilogaster* of Ceylon, both in the coloration of its underparts, and also in its measurements, which are the following—wing 18·5 inches, tarsus 3·7, middle toe *s. u.* 2.

The genus *Herpetotheres* is the next to which I have to



J.G. Keulemans lith

Hanhart imp.

POMATORHINUS SCHISTICEPS.



1 POMATORHINUS FERRUGINOSUS.
2. POMATORHINUS PHAYREI.